

**AMENDMENTS TO THE CLAIMS:**

**Please amend the claims as follows:**

1. (Currently Amended) A method for sintering a porous-glass material, having a core inside the porous-glass material, in a furnace to form a glass base material, which is a base material for an optical fiber, comprising:

preparing a ring heater having an opening, said opening having an inner diameter (D), through which said porous-glass material passes, for heating said porous-glass material;

preparing said porous-glass material having an outer diameter (d), ~~said outer diameter (d) being based on an inner diameter (D) of said opening of said ring heater;~~

putting said porous-glass material, formed by performing said preparing said porous-glass material, in the furnace; and

heating said porous-glass material in an atmosphere of dehydration gas and inert gas with said ring heater,

wherein said outer diameter(d) of said porous-glass material is within a range of  $0.5xD < d < 0.9xD$ .

2. (Canceled)

3. (Previously Presented) A method as claimed in claim 1, wherein said outer diameter (d) of said porous-glass material is within a range of  $0.6xD \leq d \leq 0.8xD$ .

4. (Currently Amended) A method as claimed in claim 1, wherein said ~~outer diameter~~  
~~(d) of said porous-glass material is based on a vertical length (L) of said ring heater~~ has  
a vertical length (L).
5. (Previously Presented) A method as claimed in claim 4, wherein said outer diameter  
(d) of said porous-glass material is within a range of  $0.5 \times L \leq d \leq 0.9 \times L$ .
6. (Previously Presented) A method as claimed in claim 1, wherein an eccentricity error  
of a core inside a glass base material manufactured by sintering said porous-glass  
material is substantially 0.4 % or less.
7. (Previously Presented) A method as claimed in claim 1, wherein said heating heats  
said porous-glass material in said furnace that is provided inside said opening of said  
ring heater so that a part of said furnace is surrounded by said ring heater.
8. (Currently Amended) A method for manufacturing a preform, which is a base material  
of an optical fiber, in a furnace, comprising:  
    preparing a ring heater having an opening, said opening having an inner diameter  
(D), through which a porous-glass material, having a core inside said porous-glass  
material, which is a base material of said preform, passes, for heating said porous-glass  
material;

forming said porous-glass material having an outer diameter (d), ~~said outer diameter being based on an inner diameter (D) of said opening of said ring heater;~~

putting said porous-glass material, formed by performing said forming said porous-glass material, in the furnace;

sintering said porous-glass material in an atmosphere of dehydration gas and inert gas with said ring heater; and

elongating said sintered porous-glass material to form said preform,

wherein said outer diameter (d) of said porous-glass material is within a range of  $0.5xD < d < 0.9xD$ .

9. (Canceled)

10. (Previously Presented) A method as claimed in claim 8, wherein said outer diameter (d) of said porous-glass material is within a range of  $0.6xD \leq d \leq 0.8xD$ .

11. (Currently Amended) A method as claimed in claim 8, wherein said ~~outer diameter (d) of said porous-glass material is based on a vertical length (L) of said ring heater~~ has a vertical length (L).

12. (Previously Presented) A method as claimed in claim 11, wherein said outer diameter (d) of said porous-glass material is within a range of  $0.5xL \leq d \leq 0.9xL$ .

13. (Previously Presented) A method as claimed in claim 8, wherein an eccentricity error of a core inside said sintered porous-glass material is substantially 0.4 % or less.

14. (Original) A method as claimed in claim 8, wherein said heating heats said porous-glass material in a furnace that is provided inside said opening of said ring heater so that a part of said furnace is surrounded by said ring heater.

15. (Currently Amended) A method for manufacturing an optical fiber in a furnace, comprising:

preparing a ring heater having an opening, said opening having an inner diameter (D), through which a porous-glass material, having a core inside said porous-glass material, which is a base material of said optical fiber, passes, for heating said porous-glass material;

forming said porous -glass material having an outer diameter (d), ~~said outer diameter (d) being based on an inner diameter (D) of said opening of said ring heater;~~

putting said porous-glass material, formed by performing said forming said porous-glass material, in the furnace;

sintering said porous-glass material in an atmosphere of dehydration gas and inert gas with said ring heater; and

elongating said sintered porous-glass material to form a preform; and

drawing said preform to form said optical fiber,

wherein said outer diameter (d) of said porous-glass material material is within a range of  $0.5 \times D < d < 0.9 \times D$ .

16. (Canceled)

17. (Previously Presented) A method as claimed in claim 15, wherein said outer diameter (d) of said porous-glass material comprises substantially  $0.6 \times D \leq d \leq 0.8 \times D$

18-20. (Canceled)

21. (Previously Presented) A method as claimed in claim 1, wherein said dehydration gas comprises chlorine.

22. (Previously Presented) A method as claimed in claim 1, wherein said inert gas comprises helium.

23. (Previously Presented) A method as claimed in claim 1, wherein said dehydration gas comprises chlorine and said inert gas comprises helium.

24. (Previously Presented) A method as claimed in claim 1, further comprising:  
descending said porous-glass material to a bottom of said furnace.

25. (Previously Presented) A method as claimed in claim 1, further comprising:  
rotating said porous-glass material in said furnace.